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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,513	07/24/2001	Harald Bonsel	1998/F-751	4848

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EXAMINER

WINTER, GENTLE E

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,513

Applicant(s)

BONSEL, HARALD

Examiner

Gentle E. Winter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4 and 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☐ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. Paper 062404.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/17/04 has been entered.

Allowable Subject Matter

2. The following is a statement of reasons for the indication of allowable subject matter:
3. Applicant has credibly argued that the '593 reference fails to teach each and every limitation of claim 5. Specifically, applicant has credibly argued that the '593 reference fails to teach that the claimed invention includes a reservoir *on each side of the membrane*, this is understood to include the top and bottom of the membrane and is disclosed as an essential element of claimed invention.
4. For at least the foregoing reason, claim 5 is believed to recite patentable subject matter.

Response to Arguments

5. The Remarks in paper 051704 have been carefully considered. The Remarks submit that the fuel cell defined in claims 1 and 5 is patentable over EPA 0 499 593 ('593 reference). The

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Remarks point to three characteristics that are asserted to be present in the claims and absent from the prior art of record.

6. The Remarks assert that the '593 reference fails to teach that the seals stop with the membrane. The Remarks state: the gasket material of the '593 reference surrounds the membrane. Despite careful reading, no language was found in the claim, suggesting that the "seals stop with the membrane". Because the argued limitation is not in the claim, the argument is not accorded patentable weight and the rejection is maintained. It is noted that the membrane of the '593 reference (element 2 in figure 2, and relevant associated text) is surrounded by the packing 6, 7, and 8. Seemingly, if the argued limitation were added to the claim, the claim would be allowable over the '593 reference.

7. The Remarks further assert that the pending claims do not include the art disclosed water supply. This argument is relevant if closed claim language is used i.e. "consisting" or "consisting essentially". Because the claim uses the broader "comprising" the pending claim does not exclude the element and the rejection is still proper.

7. The Remarks also state that the present invention includes two reservoirs on both sides. It is assumed that the Remarks meant one reservoir on each side as recited in claim 4. As an initial matter the reservoir is not in claim 1, as such the argument, to the extent that it is drawn to claim 1, is not properly before the Office. As to claim 5, which depends from 1 and recites the reservoirs, the reservoirs are disclosed as elements 9 and 9' in the '503 reference. However, the

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claim clearly states that the reservoirs are “on each side”. During a telephone interview, this was clarified to include the top and bottom, as shown in the drawings. As such, the rejection with respect to claim 5 will be withdrawn, and the claim will be objected to as depending from a rejected base claim.

8. The remarks drawn to claim 4 rely on the validity of the remarks drawn to claim 1.

Claim 1 is not distinguished from the ‘593 reference, for the reason set forth above.

9. With respect to the Remarks directed to claims rejected under European Patent Application 0 589 850 A1 (hereinafter ‘850), the Remarks state that the reference is silent with respect to reservoir in the non-active area (product water in the structural edge). Claim 2 is cancelled and “reservoirs” are not disclosed in claim 1. Nonetheless, ‘850 apparently fails to disclose product water in a structural edge. As such, the rejection is withdrawn.

Claim Rejections - 35 USC § 102—Maintained

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Application 0 499 593 A1, (hereinafter ‘593). Claim 1 is drawn to a PEM fuel cell which comprises at least two terminal plates (5 and 5’) which clamp in a membrane (2) which, apart

from the outermost edge, is covered on both side by an electrode layer, the covering of the membrane with at least one electrode (3 and 4) layer projecting into the structural edge region of the fuel cell. The same is identically disclosed in figures 1 and 2 and relevant associated text of the '593 reference. The product water in the structural edge region (reservoir) of the fuel cell is utilized to wet the membrane. See e.g. page 3 line 27 *et seq.* The edge region seals are between the terminal plates, see element 7 of figure 2. The seals (6, 7, and 8) define the reservoirs (9, 9') figure 2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over '593 in view of United States Patent No. 5,858,569 to Meacher et al.
2. Each and every limitation of claim 4 is disclosed in every one of the above references, as set forth above, except that each reference apparently fails to explicitly disclose the indicated stack design. It is noted that the general concept of stacking cells is well known in the art and believed to be inherent in the references. Nonetheless, to be rigorous Meacher is provided for the missing element and the motivation for making the combination.

3. Meacher discloses that most fuel cells produce "voltage in the range of 0.4 to 0.8 volts."

Meacher continues:

Practical applications require that multiple cells be assembled to be in series electrically, enabling the delivery of current at voltages from 6 to 120 volts. Such assemblies are referred to as "stacks" and the cells are sequentially physically stacked and clamped together."

4. The artisan seeking a power supply between 6 and 120 volts would have been motivated to operatively interconnect a plurality of fuel cells.

Conclusion

5. Pursuant to the telephone interview, of June 25, 2004, it appears that Applicant could distinguish claim 1 from the prior art of record by adding the argued limitations to the claims. Applicant is encouraged to contact this examiner if applicant feels that doing so would assist in the identification of additional patentable subject matter.

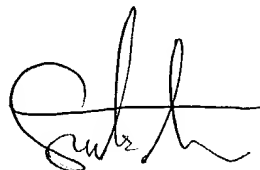
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gentle E. Winter whose telephone number is (571) 272-1310. The examiner can normally be reached on Monday-Friday 7:00-3:30.

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Questions on access to the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gentle E. Winter
Examiner
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June 25, 2004

A handwritten signature in black ink, appearing to read 'Gentle E. Winter', with a stylized flourish at the end.